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(54) Abstract Title  
A glazed bakery product

(57) An unbaked dough product comprises a dough mixture with part of the outer surface coated with a pre-glaze composition of a complex sugar. Preferably the complex sugar is a polydextrose and may form a mixture with lactose or sorbitol. The pre-glaze composition may be in a granular or powder form which is applied by sprinkling or dusting. Alternatively the pre-glaze composition may be in the form of a liquid which is applied by spraying. Fresh or dried fruits, nuts or seasonings may be added to enhance the flavour of the pre-glaze. Preferably the dough products consist of raw croissant, Danish or puff pastry or raw bread dough which are frozen at the point of manufacture. Advantageously the pre-glaze provides an adhesive surface for the addition of other ingredients before cooking and provides a protective shell around the product and exhibits non-stick properties after cooking.

GB 2 379 152 A

GLAZED BAKING PRODUCTS

The present invention relates to the application of glazes onto foodstuffs to be  
5 baked, in particular but not exclusively pastries, breads, cakes and biscuits, as well as  
savoury products.

A problem which has been encountered in the formation of baked goods is  
that, after baking, many pastry doughs have a dull, flaky or mottled appearance.  
Traditionally, this problem has been overcome by applying a glaze, such as thinned  
10 apricot jam, to the product after said product has been baked. However, if the glaze  
is not applied equally and consistently to the surface of the baked goods then this  
may have a detrimental effect upon their appearance. This problem has become of  
particular importance with the emergence of bake-off foodstuffs. Bake-off foodstuffs  
involve the manufacture of an unbaked dough mixture which is generally baked at  
15 the point of sale, often by unskilled personnel. In certain situations, it may also be  
impractical to apply the glaze due to the space needed for this operation. Since the  
glaze is responsible for the shiny appearance of the baked goods, it is important to  
ensure that it is correctly applied. Clearly an incorrect application of the glaze will  
result in a detrimental effect upon the aesthetic properties of the final baked goods.

20 The present invention relates to an unbaked dough product which comprises a  
dough mixture, part of the outer surface of which has been coated with a pre-glaze  
composition comprising a complex sugar.

The present invention also relates to a process for preparing an unbaked  
dough product which comprises forming a dough mixture and coating part of the  
25 outer surface of said dough with a pre-glaze composition comprising a complex  
sugar.

The present invention clearly provides an advantage over the prior art since  
the products and processes described herein provide a means for producing goods  
which, when baked, have an appearance which could only previously be achieved by  
30 applying a glaze to a baked product. This has advantages over methods used  
previously since the pre-glaze composition may be applied to the dough mixture in a

controlled manner which ensures a uniform and shiny appearance of the eventual product, and, furthermore, the present invention also negates the need to apply a glaze to the product after baking. Since the application of a glaze has previously involved the use of brushes and glazing tools which may be dirty, the present  
5 invention is more hygienic.

The pre-glaze composition comprises a complex sugar which is preferably polydextrose and can be in the form of a liquid, a powder or in the form of granules. If the pre-glaze composition is in the form of a liquid it will preferably be applied onto the dough mixture by spraying. Such a liquid may be in the form of a solution  
10 such as a 70% solution or a saturated solution. If the pre-glaze composition is in the form of a solid or granules it will preferably be applied onto the dough mixture by dusting or sprinkling. The pre-glaze composition is preferably applied directly onto the dough mixture. The procedures for spraying, dusting or sprinkling the pre-glaze composition onto the dough mixture may be performed in a mechanised manner.

15 The pre-glaze composition may comprise any sugars, which may include monosaccharides such as fructose, dextrose, glucose and galactose, disaccharides such as sucrose, lactose and maltose, sugar alcohols such as sorbitol, mannitol, xylitol, maltitol and lactitol, cyclic oligosaccharides such as cyclodextrin and cyclofructin and polysaccharides such as polydextrose. Typically the composition  
20 will comprise a mixture comprising polydextrose and lactose or a mixture comprising polydextrose and sorbitol. If a mixture of polydextrose and sorbitol is employed then the said mixture typically comprises from 70 to 95% polydextrose, preferably at least 80% and more preferably at least 90%, the mixture typically comprises from 0.5 to 3% sorbitol, preferably not more than 2.5% and more  
25 preferably not more than 2%, said mixture may also comprise up to 4% glucose.

The pre-glaze composition may also comprise a variety of other ingredients which may be added to enhance the appearance or taste of the final baked product, such ingredients may include dried fruit such as raisins, sultanas and apple, fresh  
fruits such as orange, pear and apple, freeze-dried fruit such as raspberries, nuts such  
30 as hazelnuts, pecan nuts and almonds, chopped nuts, sliced nuts, herbs such as basil

or rosemary, spices such as cinnamon or nutmeg, flavouring ingredients such as chocolate or toffee, colouring ingredients, additives or preservatives. These ingredients may be applied to the surface of the unbaked dough mixture either before or after the application of the pre-glaze composition, or may be mixed with the pre-glaze composition such that the different components are applied simultaneously.

A further advantageous aspect of this invention is that the application of the composition comprising polydextrose to part of the surface of the unbaked dough mixture may provide an adhesive effect with regard to the addition of other ingredients. This clearly provides an advantage from a production point of view and provides a further advantage in that the product will be more likely to retain its manufactured appearance during transportation.

Another advantageous aspect of this invention is that, after baking, the pre-glaze composition forms a shiny shell which provides a light crunchy texture to the pastry. This shell may impart some non-stick properties to the exterior of the baked goods. Further, especially if toppings have been applied to the product, the shell can assist in holding the product together. Accordingly, the shell may reduce the risk of damage to the product, in particular during transportation. The shell can also act to protect the product from the environment and to reduce staling.

The dough product of the present invention may also be frozen. The composition comprising polydextrose may be applied to the dough mixture prior to the freezing process or, alternatively, the composition comprising polydextrose may be applied to a previously frozen product. The frozen dough product may be baked directly from frozen or may be defrosted prior to baking.

The present invention also relates to a baked product which is produced by baking a dough product, the surface of which has been coated with a composition comprising polydextrose. By the term baked product is meant any product formed by baking a dough, typically pastries, breads, cakes and biscuits, however, it also applies to savoury products such as savoury croissants or savoury puff pastry products. In particular the present invention relates to pastries. By the term dough mixture is meant raw croissant, Danish or puff pastry dough or raw bread dough or

the like. In particular the present invention relates to unbaked doughs which are frozen at the point of manufacture and are baked at the point of sale. In this situation, the point of manufacture and the point of sale may be same or may be different.

## 5 Examples

An apricot filled unbaked Danish pastry was dusted with a pre-glaze composition prior to freezing. The pre-glaze composition comprised a mixture of a polydextrose, sorbitol and glucose. The relative amounts of each components in the pre-glaze composition were at least 90% polydextrose, less than 2% sorbitol and less than 4% glucose. The frozen pastry was then baked in an oven at around 190°C for around 18 to 20 minutes. After baking the appearance of the Danish pastries were compared to Danish pastries prepared in an identical manner but which were, however, not pre-glazed.

The pre-glazed pastries had a shiny appearance whilst the non pre-glazed pastries appeared dull.

A similar test was performed by comparing the appearance cherry and almond pastries, however, in this case the pre-glaze comprised a mixture of polydextrose and lactose. In this case the pre-glazed pastries were more shiny and had a more caramelised appearance when compared to the non pre-glazed pastries.

CLAIMS

1. An unbaked dough product which comprises a dough mixture, part of the outer surface of which has been coated with a pre-glaze composition comprising  
5 a complex sugar.
2. A dough product according to claim 1 wherein the said complex sugar is polydextrose.
- 10 3. A dough product according to any one of claims 1 to 2 wherein the pre-glaze composition further comprises lactose.
4. A dough product according to any one of claims 1 to 3 wherein the pre-glaze composition further comprises sorbitol.  
15
5. A dough product according to any one of claims 1 to 4 wherein the pre-glaze composition is in the form of a liquid and is applied by spraying.
6. A dough product according to any one of claims 1 to 4 wherein the  
20 composition comprising polydextrose is in a granulated form or in the form of a powder and is applied by sprinkling or dusting.
7. A dough product according to any one of claims 1 to 6 wherein the pre-glaze composition is applied directly to the dough mixture.  
25
8. A dough product according to any one of claims 1 to 7 wherein the product is frozen.
9. A dough product according to claim 8 wherein the pre-glaze  
30 composition is applied to the dough mixture prior to freezing.

10. A dough product according to claim 8 wherein the dough mixture is frozen prior to the application of the pre-glaze composition.

11. A baked foodstuff comprising a dough product according to any one  
5 of claims 1 to 10 which has undergone a baking process.

12. A baked foodstuff according to claim 11 which is a pastry.

13. A process for preparing an unbaked dough product which comprises  
10 forming a dough mixture and coating part of the outer surface of said dough mixture with a pre-glaze composition comprising a complex sugar.

14. A process according to claim 13 wherein said complex sugar is  
polydextrose.

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15. A process according to claims 13 or 14 wherein the pre-glaze  
composition further comprises lactose.

16. A process according to any one of claims 13 to 15 wherein the pre-  
20 glaze composition further comprises sorbitol.

17. A process according to any one of claims 13 to 16 further comprising  
the step of freezing said product.

18. A process according to claim 17 wherein the step of coating is carried  
25 out prior to the freezing step.

19. A process according to claim 17 wherein the freezing step is carried  
out prior to the coating step.

30

20. A process according to any one of claims 13 to 19 wherein the pre-glaze composition is in the form of a liquid and the coating step comprises spraying the liquid.

5 21. A process according to any one of claims 13 to 19 wherein the pre-glaze composition is in a granulated form or in the form of a powder and the coating step comprises sprinkling the granules or dusting the powder.

22. A process of forming a baked glazed product which process comprises  
10 taking an unbaked dough product formed by a process as defined in any one of claims 13 to 21 and subjecting said unbaked dough product to a baking process.

23. An unbaked dough product according to any one of claims 1 to 10  
substantially as hereinbefore described.

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24. A process for preparing an unbaked dough product substantially as  
hereinbefore described in any one of claims 13 to 22.

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Claims searched: 1 - 24

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## Patents Act 1977 Search Report under Section 17

### Databases searched:

UK Patent Office collections, including GB, EP, WO & US patent specifications, in:

UK Cl (Ed. T): A2B (BMB3, BMB9, BMB31, BKX)

Int Cl (Ed. 7): A21D 8/02; A23P 1/08

Other: Online: WPI, EPODOC, JAPIO

### Documents considered to be relevant:

Category	Identity of document and relevant passage	Relevant to claims
X	GB 786774 A (POULET) See page 1, lines 27 - 28	1 - 3, 7, 11 - 15 & 22
X	EP 0477832 A1 (NESTLE) See page 2, lines 26 - 31; page 3, lines 17 - 26	1 - 3, 5, 7 - 9, 11 - 13, 15, 17, 18, 20 & 22
X	US 4645674 A (ENTEMANN'S) See column 2, lines 21 - 34, col 3, lines 56 - 63	1, 2, 5, 11 - 14, 20 & 22
X	JP 60030636 A (TSUGIO) See abstract	1, 6, 7, 11 - 13, 21 & 22

X	Document indicating lack of novelty or inventive step	A	Document indicating technological background and/or state of the art
Y	Document indicating lack of inventive step if combined with one or more other documents of same category.	P	Document published on or after the declared priority date but before the filing date of this invention.
&	Member of the same patent family	E	Patent document published on or after, but with priority date earlier than, the filing date of this application.